

### ABSTRACT

The present invention describes diagnosis and treatment of antibody-mediated inflammatory auto-immune diseases. The biochemical mechanisms underlying such disorders are described as characteristic molecular markers and antibody-mediated ligand-receptor interactions. Specifically, the activation of T-cells by disease specific IgG binding to the IGF-1 receptor is shown to underlie thyroid associated ophthalmopathy associated with Graves' disease and rheumatoid arthritis. Diagnostics for detection of disease are provided, as are therapeutics based on the determination of the mechanisms underlying a particular pathology.